

Meeting Summary

**National Institute of Justice
Mapping in Corrections Resource Group Meeting
Marriott Marquis Hotel
New York, NY**

August 22, 1999



Background

The *Mapping in Corrections Initiative* is an effort by the National Institute of Justice's Crime Mapping Research Center (CMRC) to promote the use of geographic information systems (GIS) for research and practice in community and institutional corrections. GIS technology is not new to the criminal justice field; few applications of this tool in the area of corrections have been identified¹. Some examples of the utility of GIS for corrections might include: identifying areas prone to inmate violence in institutional settings; assigning probation and parole officers by geographic location; directing probationers and parolees to services and treatment centers; and making site selection decisions for the placement of new facilities within a community.

In order to develop a baseline understanding of current GIS use in corrections, the CMRC has conducted listserv queries, Web searches, and reviews of the available literature. In conjunction with these scanning activities, we felt it was important to meet in a structured but open setting to discuss with corrections officials and researchers the ways in which mapping can be useful to them. As a result, the *Mapping in Corrections Resource Group* was convened at the American Probation and Parole Association's Summer Training Institute on August 22, 1999, at the Marriott Marquis Hotel in New York, New York. The purpose of this meeting was to explore the utility of computerized crime mapping applications for the fields of community and institutional corrections.

Format

The format of the meeting was developed to promote the most informative and productive discussion possible between those invited and staff of the CMRC. To facilitate conversation, presentations were given on the use of mapping by those who CMRC staff identified as pioneers in the use of mapping for corrections. Presenters included *Wayne Mixdorf from the Wisconsin Department of Corrections* which is currently using mapping for probation and parole efforts; *Eric Cadora from the Center of Alternative Sentencing and Employment Services* which is using mapping for community justice programs; *Richard Harris from the Delaware Statistical Analysis Center* who discussed the use of mapping for state corrections; and *Michael Geerken from the Office of the Orleans Parish Criminal Sheriff*, where mapping is planning to be used within an institutional setting. Each of these presentations was followed by a short discussion by all attendees. A luncheon presentation on a current NIJ grant on combining police and probation research to reduce crime was also a part of the meeting. Towards the completion of the meeting, CMRC staff moderated a discussion that focused on potential mapping applications, barriers to implementation, and solicited suggestions from attendees for how the CMRC should promote this initiative. This document will provide a summary of the meeting proceedings, highlighting existing efforts, the luncheon speech, and commentary from the participants. A detailed transcript of the meeting can be obtained from Eric Jefferis, at 202.616.7108 or jefferis@ojp.usdoj.gov.

¹ Rich, 1993, O'Connell, 1998

Mapping in Corrections
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Mapping for Probation and Parole

Presentation by: Wayne Mixdorf, Wisconsin Department of Corrections

Prompted by recommendations from researchers on the Governor's task force on corrections, two counties in Wisconsin were allocated monies for community corrections efforts. Wayne Mixdorf is a firm believer in the power of data-driven decision making and, using his knowledge of the CompStat model², suggested that the department begin to base its work on neighborhoods. With these funds, the Wisconsin Department of Corrections (DOC) in Mixdorf's region began to compile a database of more than 4,500 files.

Mr. Mixdorf explained the process by which his agency sorted through its paper files and mapped the locations of probationers and parolees in the region. Using pin maps to simply identify the locations of those supervised, and density maps to demonstrate concentrations of offenders, the DOC was able to prioritize areas in need of increased neighborhood supervision. The department subsequently identified four target neighborhoods.

In these target neighborhoods, the department was able to identify focus areas in need of increased resources, as well as control areas for the purpose of comparison. In the target neighborhoods the department has been able to strategically approach issues of supervision, perceptions of safety, and offender movement. Mapping has enabled the DOC to focus on community-based corrections in dealing with businesses, neighbors and local officials, rather than focusing narrowly on offenders. Since the department has begun to target and concentrate its efforts in these high-risk areas, delivery of services have improved and subsequently, probationers in these areas had improved completion outcomes.

In addition to these efforts, mapping has assisted the department with intake, informing local and state legislators, identifying absconders, improving officer safety, and allocating resources. Mr. Mixdorf also discussed the cooperation of the Wisconsin Department of Corrections' GIS abilities with local police officials. Specifically, their mapping capabilities have assisted the Madison Police Department to identify offenders in areas with specific crime problems. As Mixdorf stated, "[Now, the] DOC is in the mapping business for the police."

In conclusion, Mr. Mixdorf pointed out that mapping capabilities should be integrated throughout corrections efforts. Line-level applications could help probation and parole officers to plan their time and location of visits in a more geographically efficient manner. At the management level, maps would help administrators plan resources more effectively. Mixdorf posited that now is the optimal time for these types of projects, yet

² CompStat was implemented by the New York Police Department as a data-driven approach to managing police resources and identifying and responding quickly to emerging crime problems. It involves a process or accountability that relies on accurate and timely data coupled with creative, cross-unit and cross-agency partnerships to combat crime rashes as soon as they are identified.

the major difficulty will be overcoming the idea of “fortress corrections” and adopting a more community-based approach.

Issues raised for discussion (link to discussion in transcription):

- ✓ *Landlords continually renting to offenders*
- ✓ *Officer investment in neighborhoods*
- ✓ *Cost benefit*
- ✓ *Barriers to implementing mapping in probation and parole (Link to section on “Barriers to Overcome” later in document)*

Mapping for Community Justice Programs

Eric Cadora, Center of Alternative Sentencing and Employment Services

Todd Clear, John Jay College of Criminal Justice

The Center for Alternative Sentencing and Employment Services (CASES) is a nonprofit alternative to an intermediate sanctioning program. Yearly, the program handles approximately 2,000 offenders in New York City. Based on prior research arguing that safety and well-being can be attributed to location more than to case process and individuals, CASES has been developing grassroots organizational projects that focus on partnerships. Of particular importance to this effort is knowledge of the neighborhoods in New York and offenders’ chances of success within those neighborhoods.

Cadora stated that CASES’s Community Justice Project (CJP) is one example of this type of effort. The CJP seeks to expand partnerships between criminal justice agencies and communities, maintaining the priority of strengthening local institutions, families and local organizations. Such local efforts and institutions are the key to the long-term safety of a neighborhood, however, these community efforts often are pieced together with little collaboration on a particular problem. As a consequence, barriers exist between agencies, communities and organizations and the CJP attempts to overcome these obstacles.

Clear noted that the goal of CASES’ community justice project involves a profound rethinking of the role of the criminal justice system. Mapping can be used to aid programmatic decision making for this effort and can assist those involved to think thematically about justice programs. The CJP is an attempt to change the theme of justice response by defining community justice initiatives and their relationship to place.

This is precisely where geographic analyses can be of most assistance, remarked Mr. Cadora. There is a need for renewed responsibility on the part of probation, parole, institutions, juvenile justice officials and others. The key to success is organization. Specifically, local organizations must think about their roles in the community and how they can complement existing programs.

To exemplify these points, Cadora developed several maps for the CJP. Specifically, they looked at numbers of available prison beds, proportions of males sentenced to prison in certain neighborhoods, densities of correctional facility admissions by block, and

expenditure estimates. One example demonstrated the relationship between inmates' residences and the allocation of corrections funding—the differences in this seemingly important relationship were striking. It was easy to see how this type of mapping for community justice would be informative and instructive for communities, local organizations, businesses and decision-makers. The project aims to spur partnerships that are locally focused and target the community as a whole.

Issues raised for discussion (link to discussion in transcription):

- ✓ *Costs to families*
- ✓ *Identifying resource pools*
- ✓ *Quality of life for local residents*
- ✓ *Building more prisons*
- ✓ *How to spend funds*

Mapping for State Corrections

Richard Harris, Delaware Statistical Analysis Center

The state of Delaware has a history of using mapping for strategic planning. Working in concert with the Delaware Department of Corrections, the Statistical Analysis Center undertook two mapping-related projects. The goal of these projects was to examine the location of probationers and parolees in relation to readily available statewide services.

The first project described by Harris was the statewide mapping of probationers according to zip code. Locations of identified probation officers and day reporting centers were overlaid on the offender residences. The product revealed that in most counties, the services were located in close proximity to the highest concentration of offenders. In areas identified as lacking in adequate offender services, the DOC could make an informed decision about future service provider locations.

The second project examined the locations of releasees in relation to the locations of substance abuse treatment centers, social service offices, hospitals, correctional offices, and bus lines. The city of Wilmington showed offenders to be well served, but in other parts of the state, that was not the case. The resultant map demonstrated that as the distance from the Wilmington area decreases, transportation and service providers grow sparse. Harris also touched on the problems encountered in this research involving geocoding. Specifically, the “hit rates” (or correct address matches) in more rural areas of Delaware were much lower, due to insufficient address information. This problem of geocoding offenders in rural areas is a barrier that needs to be addressed.

Issues raised for discussion (link to discussion in transcription):

- ✓ *Placement of new treatment facilities*
- ✓ *Reactions of corrections agents and communities to mapping*
- ✓ *Data issues/problems*
- ✓ *Confidentiality concerns for juveniles*

Mapping for Institutional Corrections

Michael Geerken, Office of the Orleans Parish Criminal Sheriff

Based on conversations with a private company with expertise in mapping technology, the Orleans Parish criminal Sheriff's office developed an interest in GIS for Jail management. The company had completed work for a neighboring parish and has demonstrated to Geerken and his colleagues that maps are more than pretty pictures.

Mapping for institutional purposes deviates from traditional mapping efforts in that inmates, unlike average citizens, are told by officers where they will live, where they will go and what activities they may participate in. Mapping technology is not used just for delineating space, mapping can be used to provide a geographic reference for placing, tracking and serving offenders. Thus, the development of the Intuitive Inmate Information Retrieval system has ensued in Orleans Parish, Louisiana. The primary purpose of the GIS is for operational, management and control efforts. For example, inmate tracking through real-time monitoring, classification and housing of inmates in accordance with security level, and identifying patterns and relationships related to security or immediate change.

Geerken reported that daily intake and turnover in the Orleans Parish jail is often high and daunting. As a result, staff turnover is a problem and finding ways to train new officers quickly and easily is needed. Computer based applications may assist in streamlining the training process. Other identified uses include scheduling inmate appointments and facility/building management. Geerken stated that the goal of the IIIR system is to develop an integrated solution, wherein the jail facility data would be integrated into a central management system, giving administrators the ability to produce full-functioning reports and orders.

Mr. Geerken then presented maps to the group demonstrating several functions of mapping within the institution. The first example demonstrated the locations of those incarcerated according to gang membership. Such information could prove vital in preventing outbreaks of violence and assigning new inmates. The second example demonstrated how GIS could be used to depict sick call requests, appointments, complaints and other ad hoc information. Using this system, one may find out information on an inmate, his or her classification, need for a sick call, and subsequently generate a form for this sick call. Additional booking, arrest and identification data can also be made available through an interactive interface.

In conclusion, Mr. Geerken stressed the utility of mapping in reducing paper work, simplifying tasks and training and exploring potential scenarios within the facility.

Issues raised for discussion (link to discussion in transcription):

- ✓ *Other potential applications for institutions*
- ✓ *Interactive possibilities*
- ✓ *Importance of case by case accuracy*
- ✓ *Computer consultants*

- ✓ *Potential research utility*
- ✓ *Implications for policy making*
- ✓ *APPA's Technology Committee*

Luncheon Presentation

Combining Police and Probation Research to Reduce Burglary: Testing a Crime Analysis Problem-Solving Approach

Vince Webb, Arizona State University

Billie Grobe, Maricopa County Adult Probation

The Phoenix-Maricopa County area is growing quickly and as a consequence suffers from over 21,000 burglaries per year and an unacceptable clearance rate of only 5%. In light of this and citizen feedback, the police department has targeted burglary as a top priority. In response, the police department intends to combine offender and incident data, develop real time end-user access to GIS, improve and develop access to the system from police and probation offices and develop mapping applications and use capacities, driven by the needs of the end user.

Webb's research, funded under a National Institute of Justice grant, is based upon building a common offender-event database, which can be used for operational and strategic purposes. Using linked police and probation databases, GIS applications can be used to promote problem solving and to evaluate the use and impact of joint problem solving in reducing burglaries.

The research agenda was developed in concert with the University of Arizona and Maricopa County Adult Probation Department. While the university was interested in focusing on the value of GIS in improving officer effectiveness, tracking probationer movement and increasing community safety, the probation department was interested in improvement of its operational daily activities. Combining their interests, the university responded to NIJ's Policing Solicitation with a proposal to develop the joint database and evaluate its effectiveness at reducing the target crime, burglary. This database will make available information such as crime location, contact record and type of report. In this model, probation officers will be able to pull up the actual incident report for their probationer, affording many timesaving and informational benefits to both parties.

The project involves a field experiment that uses two Phoenix Police Department precincts/Maricopa County Adult Probation districts and two control districts. The problem solving process will involve SARA-like³ models, whereby probation and police officers work together to reduce burglaries. Both process and outcome evaluations will be included in the research will examine a variety of measures including time spent, number of meetings, goals accomplished, etc.

³ This refers to a technique commonly used by police for problem identification and solving. The key features of this model include: Scanning, Analysis, Response and Assessment.

Issues raised for discussion (link to discussion in transcription):

- ✓ *Potential effects of publicity*
- ✓ *History of cooperation between the experimental agencies*
- ✓ *Inclusion of citizens' groups*
- ✓ *Mapping treatment and intervention services*
- ✓ *Meta-data*

Open discussion moderated by CMRC staff

Nancy La Vigne and Eric Jefferis of the Crime Mapping Research Center suggested that the group offer other potential applications of GIS and mapping to corrections in addition to those discussed earlier in the day. Responses are as follows.

Other possible applications of mapping to corrections:

- Tracking probationers in terms of risk and need. Ms. Grobe indicated that she is interested in tracking probationers in terms of their degree of risk and need for resources. Mr. Jefferis added that placement of new facilities ties into this idea.
- Patterns of offenders. Patterns of offender residences may inform and alter probation officer supervision practices.
- Transfer of information from the public to private sector. Potential for informing the commercial sector in regard to efforts to track clients.
- Application of research and planning software to line level efforts. Mr. Geerken commented on the trend whereby someone in research and planning begins to use an application and as more staff are able to apply applications, it works its way down to the line level. Nancy La Vigne added that existing community policing software in development under an NIJ grant by ESRI could be adapted to assist corrections efforts.
- Maximizing Opportunities for Success. Mr. Mixdorf suggested that mapping can identify areas where offenders would be most successful at desistance. Specifically, areas with employment, treatment and other critical services would be easily accessible to the parolee or probationer.

Mr. Jefferis then asked the group to comment on barriers to implement mapping in their efforts. As a follow-up, Nancy La Vigne inquired as to the role the Crime Mapping Research Center should play in this initiative. Responses throughout the meeting and to this inquiry are as follows.

Barriers to Overcome:

- Institutional Barriers. Mixdorf, Talbot, and others commented on the institutional barriers that often exist when trying to implement GIS. There are often issues with:
 - Data sharing within departments and with the outside community
 - Integration of the systems
 - Ownership of the product
 - Buy-in, establishing excitement and need for the tool

- Funding
- Lack of adequate infrastructure
- Ideology. Building on the concept of “buy-in,” there is often reluctance of persons to move outside of “fortress corrections” and into an ideology that is more community based.
- Unkept Promises. Todd Clear noted that often those involved with delivering mapping technology are unable to deliver on the promises they make. Mr. Mixdorf responded that line staff are disappointed and discouraged when administrators are unable to deliver on the changes they propose.
- Cost Benefit.
- Transitions. Mr. Swartz commented that he has seen organizations moving far too quickly, spending too much on too few analysts without having the infrastructure established or the resources to cope with the changing way of business.
- Community reaction. Some remarked on the “Not in my backyard” response that is evoked in communities when corrections officers become involved or are stationed in the community. Communities may not want offenders to be identified on a map for fear of decreased property value.
- Geocoding issues. Several attendees commented on problems with missing data and/or case by case accuracy. Problems arise with:
 - Difficult addresses, as in Queens, New York
 - Rural communities
 - Confidentiality issues associated with young offenders
- Keeping up. Mr. Talbot added that there is a need for expertise behind the system. The challenge is to develop systems with a simple interface that reflects the sophisticated abilities of the system. This also reflects on the investment in the development of an easy system vs. hiring those who can use a more complex interface.
- Need for a champion. In every new effort, there is a need for a champion of the project, someone who will see its merits and constantly work toward its success.

What can the CMRC do?

- Exposure. The CMRC can inform and expose agencies to this type of tool and its utility. Ms. Conroy remarked that people tend to define their work on a smaller, rather than a larger, basis. The CMRC could disseminate information on other projects to get people excited about the possibilities.
- Funding. Through its traditional grant process, the CMRC can encourage NIJ solicitations that include the development of these tools for corrections research.
- Marketing. In order to incite the necessary excitement for GIS, Vince Webb suggested that the focus be on the operational payoffs that mapping tools would afford. Ms. Grobe stated the importance of emphasizing the control that staff would have of the data. This inspired a host of titles/themes from participants including:
 - Effective approaches to managing caseloads
 - Probation problem solving
 - Probation and restorative justice

- Decision Support
- Need for Leadership. Mr. Kroman indicated that the launch in momentum of mapping for police might be instructional for corrections. Mr. Jefferis mentioned that partnerships with police, fostered and encouraged by the CMRC, might be one impetus for corrections to catch on.
- Research partnerships. Nancy La Vigne commented that police often partner with researchers, and this may be one avenue for corrections.
- Promoting buy-in. Through outreach and education efforts by the CMRC, smaller corrections agencies may see the benefits and be receptive to mapping tools. Vince Webb suggested that high-profile projects can be used as exemplars of problem solving
- Training. Once the buy-in and interest is achieved, the CMRC will need to be prepared for the demand for training that will result.